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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

MAY 24 1989

OFFICE OF
SOLID WASTE AND EMERGENCY RESPONSE

Mr. Gary Sczepanski, Supervisor
Hazardous Waste Treatment Facility
Dept. E065, Bldg. 509-Level 1
McDonnell Douglas Astronautics Company
P.O. Box 426
South Charles, MO 63302

Dear Mr. Jansen:

I am writing to request additional information concerning the delisting petition submitted by McDonnell Douglas Astronautics Company (#0751) for an exclusion of wastewater treatment sludge, listed as EPA Hazardous Waste No. F019, generated at your St. Charles, Missouri facility. A preliminary review of your petition has been completed. Your petition, as submitted, has not sufficiently demonstrated that the petitioned waste is non-hazardous. In order to complete the review of your petition, we need the following information.

Process Descriptions

The process descriptions that you have submitted, although detailed, do not clearly explain the specific processes that generate the petitioned waste. In order for us to complete our evaluation of your petition we need to thoroughly understand the processes occurring at your facility and how they may influence the composition of the petitioned waste. Therefore, to further clarify your process descriptions please provide the following information.

- Describe briefly how components are prepared for processing prior to the primary electroplating operations, including descriptions of operations such as surface and equipment preparation (e.g., machining, degreasing, cleaning, coating). Please also provide a simple schematic that shows the sequence of these "pre-process" steps. Identify all pre-process feed materials that are specifically used at your St. Charles facility in your descriptions and schematics. Also identify wastes that are generated during these steps and indicate where (for example, in the wastewater treatment facility) these wastes are sent.

- For procedures which are considered optional (e.g., 1,1,1-trichloroethane vapor degreasing), please explain the criteria for deciding whether these steps should be conducted and how often these steps are actually followed.

- Describe briefly the sequence of steps that are followed during the chemical conversion coating process and subsequent coating operations conducted at your facility. Please also provide a simple schematic that shows the sequence of these steps, identifies feed materials used at your St. Charles facility, and identifies wastes that are generated and where these wastes are managed.

- Describe in more detail the chromium reduction step of your wastewater treatment and discuss whether levels of effective reduction are consistently maintained.

- Describe briefly all operating cycles (e.g., batch cycles versus continuous operation; start-up, shut-down, and other process transients; and maintenance and cleaning operations) on a daily, weekly, or other period basis as appropriate. Please also provide a list of wastes that are discharged to the concentrated chromium waste holding tank (e.g., Pickle B, Alodine 1000).

- Please inform us whether you plan to change any process operations or feed materials in the near future. Please recognize that the exclusion for your petitioned waste, if granted, will be limited to the specific waste that you describe in your petition.

- Describe how the composition and generation rate of the petitioned waste may periodically vary because of any aspect of manufacturing process variability. Specifically explain the observed variability of total chromium and lead levels in the petitioned waste (i.e., Sample #4 levels were notably higher than the other three samples).

- Provide an estimate (maximum and average) of the amount of filter press sludge that is generated on a monthly and annual basis. Your petition only provided a volume estimate per week.

- Please describe the methods for segregating your organic wastes that you noted in your petition. How are the residues generated during incineration of these wastes

managed? What is the likelihood that these organic wastes may be discharged to the wastewater treatment facility via floor spills (mentioned in Appendix 3 of your petition as one of five wastewater categories)? Are the five wastewater categories the only wastes that are discharged to the wastewater treatment facility? If not please provide further detail.

Material Safety Data Sheets

Some of the Material Safety Data Sheets (MSDS) in your petition provide only a vague description of the constituents in your process materials. For example, the MSDS for MMS-401 reads, "a mixture of alcohols, ketones, acetates, and aromatic and aliphatic hydrocarbons". It is difficult to identify the appropriate hazardous organic constituents for which you must analyze on the basis of this information. Therefore, you must specifically determine, from the manufacturer if necessary, whether there are hazardous waste constituents (e.g., those substances listed in 40 CFR 261 Appendix VIII and Enclosure A) contained in the materials. We are specifically concerned about the following materials:

Material	Constituents of Concern
Turco 5351	Phenol, methylene chloride
Turco 5469	Phenol, methylene chloride
Sandstrom 9A	Methyl ethyl ketone, antimony, toluene
MMS-401	(described above)
Curing Oil	(undescribed material used in your impregnator process)

In addition, you provided MSDSs for the following materials, but we were unable to identify in which process steps these materials were used. Please provide further detail.

MMS-401
Turco 4215 Special
Turco 5351
Turco 5469
Sandstrom 9A
Turco 3878

We request also that you provide a Material Safety Data Sheet for Metaseal 19V5 Resin.

Sampling Representativeness

In your submittal, you stated that your impregnator process (P.S. 11501) was changed on March 21, 1988. Because the four samples submitted as part of your petition were collected prior to this process change, we do not consider these samples to be representative of the waste currently generated at your facility. Therefore, you will need to collect and analyze at least four additional samples. These samples should be collected over at least a one-month period and account for potential constituent variability such as that discussed below. If four samples do not sufficiently characterize the known variability of the waste, then you should submit enough samples to do so.

We are concerned that your samples may not fully characterize the waste being generated over the entire range of operating conditions. For example, you sampled the waste on October 1 and 18, 1987, during the time that Pickle B and Alodine 1000 concentrated wastes were being treated; however, from your discussion it appears that numerous processes other than these could potentially affect the character of the petitioned waste. In addition, your sampling information does not indicate whether these concentrated waste dumps had reached the final treatment steps at the time of the sampling.

Before you resample the petitioned waste, you must clearly consider how each process interacts and how these cycles affect the composition of the petitioned waste. In order for your waste samples to be considered representative of the waste generated at your facility, you must provide a demonstration which clearly supports the appropriateness of your sampling period and why it represents the full potential variability of the petitioned waste. This should include an account of all processes on-line at any time during normal facility operations and those which are on-line only during specific times. You may want to consider submitting any available records regarding bath dumps (i.e., discharge logs) if you maintain them.

Analytical Requirements

We believe that organic constituents have been inappropriately omitted from your analytical testing procedures. For example, it is clear from your process descriptions that solvents from the degreasing operations may enter the wastewater treatment process from the rinsing of parts. Unless you provide further documentation (e.g., mass balance arguments that demonstrate that these constituents cannot appear in the waste at levels of concern), you must collect and analyze a sufficient number of samples to represent all likely variations in the

waste (i.e., a minimum of four composite samples of the petitioned waste). These samples must be analyzed for any of the hazardous constituents listed in 40 CFR Part 261, Appendix VIII and in Enclosure A that may be present in the waste. Please note that Total Organic Carbon (TOC) analyses need not be conducted. Therefore, all samples should be analyzed for the following constituents.

- Total constituent concentrations of the EP toxic metals, nickel, antimony, cyanide, and sulfide.

- Concentrations of hexavalent chromium (to show that the chromium present in the waste has been effectively reduced)

- Total levels of oil and grease.

- EP toxicity analyses for all the EP toxic metals, nickel, antimony, and cyanide. If total oil and grease levels are greater than 1 percent then use the oily waste extraction procedure. When testing for leachable cyanide deionized water should be substituted for acetic acid in the leaching procedure.

- Total constituent analyses for all constituents listed on 40 CFR 261, Appendix VIII and the substances listed in Enclosure A which may be present in your waste. (Using your knowledge about the wastes, MSDS data, and other appropriate information, you should identify those waste constituents likely to be present in the waste. At a minimum, we believe this includes the following constituents: methylene chloride, methyl ethyl ketone, phenol, toluene, 1,1,1-trichloroethane, trichloroethylene, and xylene.)

  We recognize that the Appendix VIII list presents a number of problems for some constituents. However, we request that any available information concerning the presence of these constituents be included as part of a complete petition. For analytical testing purposes, you must analyze the samples for those compounds which can be accurately quantitated using appropriate methods described in "Test Methods for Evaluating Solid Wastes: Physical and Chemical Methods (third edition)", EPA Publication SW-846, November 1986. It should be noted that analytical test methods exist for all constituents listed in 40 CFR 264, Appendix IX.

Quality Assurance and Quality Control

All sampling and analyses must be accompanied by the appropriate QA/QC information. This should include the following.

- Detailed descriptions of each procedure used to collect, prepare, preserve, and analyze each sample. Also provide a list of names and models of all sample collection, preparation, preservation, and analytical instruments used. Please note that all analytical data must adhere to all sampling, preservation, and sample holding time requirements set out in SW-846. Dates of sampling, extraction, and analyses should be provided.

- Identify which personnel conducted the analyses of the four samples submitted in your petition. Please also indicate the highest level of education for Mr. Gary Sczepanski.

- Descriptions of all appropriate QA/QC procedures followed during sample collection and analysis.

- Results from the following QC procedures (as appropriate): One EP (or OWEP) toxicity test run for each of the EP toxic metals, nickel, antimony, and cyanide using the method of standard additions; method blank analyses; field QC analyses: (field blanks, equipment blanks, trip blanks); matrix spikes analyses, matrix spike duplicate analyses, and instrument calibration data. Please also clarify what "% acetic acid used" refers to in Appendix 5 of your petition.

Procedures for these and other appropriate QC procedures are described in Chapter One of SW-846. Each analytical method in SW-846 notes which QC procedures are appropriate for that particular test method.

In order for us to complete our evaluation of your petition in a timely manner, you must fully respond to this request for additional information within six months of the date of receipt of today's correspondence. If we do not receive a complete response from you within six months, in accordance with EPA policy, we will dismiss your petition from the petition review process (see 53 FR 6822, March 3, 1988). In that case, we will notify you of dismissal by letter. Please note that it is to your advantage to submit the requested information before the six months expire, so that any remaining deficiencies identified by the Agency subsequent to your submittal can be remedied within the six-month time frame. If you do not believe that you can

fully respond within six months, you may wish to withdraw your petition now and submit a complete new petition later at your convenience. If you prefer this option, you must send a letter to EPA withdrawing your petition and indicating that the petitioned waste is considered hazardous and will be managed as such. This letter should be forwarded to:

Jim Kent
U.S. Environmental Protection Agency
Office of Solid Waste, OS-343
401 M Street, S.W.
Washington, D.C. 20460

Should you have any questions or require additional information, please contact the technical reviewer, Eileen Regan of SAIC, at (703) 734-4344, or you may call me at (202) 382-4206.

Sincerely,

Robert Kayser

Robert Kayser, Acting Chief
Variances Section

cc: Jim Kent, EPA HQ
Mike Sanderson, Region VII
Chet McLaughlin, Region VII
Jenny Utz, SAIC
Eileen Regan, SAIC